

Web Programming and Database Development

The Career

The Web Programming and Database Development program teaches students to create dynamic, interactive data-driven Web applications for online shopping, banking, and auction sites. Employers are looking for specifically trained people for Web programming and database development.

Average starting salary: \$39,998

Source: This information is based on the 2007 Dunwoody Employment Report

The Program

Web programming provides students with the opportunity to create real world applications by participating in a unique program that teaches basic programming concepts by using tools such as Lego® Mindstorms Robots™ and Alice©. Necessary math is covered in the program. Students will work with the following technologies:

- Web: XHTML, XML, ASP.NET, Cold Fusion
- Programming: Visual Basic.NET, Visual C#.NET, JAVA
- Databases: Microsoft SQL Server, Microsoft Access, MySQL

Program Length

Graduates of this six-quarter program earn an Associate of Applied Science (A.A.S.) degree.



A.A.S. Degree Requirements

CWEB111	Business Concepts
CWEB112	Programming Fundamentals I
CWEB113	Micro Computer Systems & Support
CWEB122	Digital Media
CWEB123	Programming Fundamentals II
CWEB124	Systems Analysis
CWEB125	Web Services
CWEB132	Database Design
CWEB133	Introduction to Web Languages
CWEB211	Application Building
CWEB212	Database Development
CWEB215	Advanced Programming
CWEB222	Introduction to XML
CWEB223	Web Publishing Systems
CWEB224	Web Application Development
CWEB225	Business Application Customization
CWEB226	Database Systems I
CWEB227	Database Systems II
CWEB233	Online Business
CWEB235	Senior Seminar
COMM100	Communication Theory and Practice
COMM150	Communication: Interaction and Process
COMM250	Technical Writing
ECON100	Survey of Economics
MATH112	Math for Computers
SPCH101	Public Speaking
	Arts/Humanities Electives
	Diversity Electives
	General Electives

Applying to Dunwoody is easy

To apply online, visit dunwoody.edu. Or, to speak with a Dunwoody Admissions representative, call 612-374-5800 or 800-292-4652.

Dunwoody's Admissions team is committed to working with you to ease and simplify the admissions process and provide all the necessary information regarding our academic programs, degree opportunities, financial aid, expectations and everything else that enters into such an important decision.

Other exciting Computer Technology programs and degree options are available. Visit dunwoody.edu for complete details.



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Minneapolis, MN 55403
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Dunwoody's 2+2 concept means every graduate of a Dunwoody two-year associate's degree program is qualified to be admitted into one of our breakthrough bachelor's degree programs if they would like to continue their education.

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Course Descriptions

CWEB111 - Business Concepts

Students will study various business concepts such as accounting, human resource development, marketing, investing, security, legal, and entrepreneurship. Potential types of businesses that students will look at in the course include e-commerce, consulting, outsourcing, and training.

CWEB112 - Programming Fundamentals I

Basic Programming Principles - Data types, variables, expressions, operators, Boolean logic, algorithm creation, pseudocode, flowcharts. Strong coverage of structured programming and programming logic constructs (sequence, selection and repetition).

CWEB113 - Micro Computer Systems & Support

Students learn to identify the basic components of a computer system. Students will also learn basic network fundamentals.

CWEB122 - Digital Media

Students become familiar with digital media components and practice integration for computer and internet applications. Topics include use of graphics, animation, audio, video, and digital documents with supporting technologies.

CWEB123 - Programming Fundamentals II

Builds upon Programming fundamentals. Students will learn abstraction, modularization, dynamic and static data-structures, object-orientation, and event-driven programming.

CWEB124 - Systems Analysis

Students survey the various development approaches for software development from traditional systems analysis to contemporary agile methods. Students develop models and prototypes to practice the processes and techniques needed to design and build quality software systems.

CWEB125 - Web Services

Students will become familiar with web servers. The primary concentration will be on: Internet information services and Apache. Students will have the opportunity to setup, administer and configure the web servers along with basic administration of Windows and UNIX servers.

CWEB132 - Database Design

Students integrate relational database concepts and design database management systems for enterprise information needs. Business rules are analyzed to diagram data models with Unified Modeling Language. Normalization is applied to convert conceptual models into logical models. Structured Query Language is used for data definition to construct physical databases, for data manipulation, and for data computations.

CWEB133 - Introduction to Web Languages

Students are introduced to HTML (Hypertext Markup Language). HTML code is written with a simple code editing tool and standard web browser. Students will become fluent in basic page structure, tags, links, text formatting, forms, tables, and debugging with trouble-shooting skills. Additional topics include Cascading Style Sheets (CSS) and XHTML.

CWEB211 - Application Building

This course will introduce students to basic concepts used in creating windows based applications. Students will learn how to work with a high-level event-driven programming language which puts an emphasis on programming objects that are used in a user interface.

CWEB212 - Database Development

Students utilize database server technology to build enterprise-class data services for handling complex business logic. Topics include database server architecture, data integrity, data types, indexing, procedural SQL, constraints, stored procedures, triggers, and transactions. Students may also explore advanced topics such as database administration, security, and data warehouses.

CWEB215 - Advanced Programming

Students will learn advanced programming concepts for the web or desktop based applications. Advanced topics covered include graphics and or animation.

CWEB222 - Introduction to XML

Students will work with XML (eXtensible Markup Language) to create structured content and data for business applications. Topics include language syntax, document model, document types, schemas and style sheets.

CWEB223 - Web Publishing Systems

Web programming on the Internet is becoming simpler all the time. In this course students will explore techniques that have become central to web publishing using open source. Students will utilize various tools to allow them to publish Web content.

CWEB224 - Web Application Development

Web sites are less and less a series of static HTML pages and more and more a complex integrated application to bring content to the user. Students will explore techniques for creating dynamic websites that utilize page template, databases, and server-side scripting to craft web applications.

CWEB225 - Business Application Customization

Every business large or small requires custom applications to operate. Students will build a custom business application using a programming development environment. This course will help reinforce their programming background by allowing them to apply basic programming concepts when building the application.

CWEB226 - Database Systems I

Students will learn to use the Structured Query Language to write advanced queries to help them perform administration tasks and programming. This course builds on concepts that students learned in Database Design and Database Development.

CWEB227 - Database Systems II

Students will continue with concepts from Database Systems I, and learn to apply those concepts to develop web forms.

CWEB233 - Online Business

Students will create a dynamic interactive data-driven web application for a web storefront. Students integrate scripting templates, databases, file systems, directories and other enterprise systems to develop a web application service.

CWEB235 - Senior Seminar

Students will perfect their job skills and learn the basics of entrepreneurship. Resume writing, interview skills, and working as an independent consultant will be among the topics covered. Students will also use this course to prepare their portfolios for final review.